GOVERNMENT OF INDIA
RAILWAYS
LOK SABHA

STARRED QUESTION NO:250
ANSWERED ON:11.05.2016
Go Green Initiatives
Tadas Shri Ramdas Chandrabhanji

Will the Minister of RAILWAYS be pleased to state:

(a) whether the Railways has undertaken major initiatives to Go Green and if so, the details of areas/activities identified;
(b) the status of Go Green initiatives;
(c) whether the Railways is considering to float green bonds to fund its clean energy projects;
(d) if so, the details thereof and the objectives thereof; and
(e) the other methods/techniques/technologies by which the Railways is likely to reduce carbon emission and generate clean energy?

Answer

MINISTER OF RAILWAYS
(SHRI SURESH PRABHAKAR PRABHU)

(a) to (e) A Statement is laid on the Table of the House.
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STATEMENT REFERRED TO IN REPLY TO PARTS (a) TO (e) OF STARRED QUESTION NO. 250 BY SHRI RAMDAS C. TADAS TO BE ANSWERED IN LOK SABHA ON 11.05.2016 REGARDING GO GREEN INITIATIVES
(a) Yes, Madam. The major initiatives undertaken by Railways to Go Green include following areas/activities:
(i) Improvement in efficiency of Fuel and Energy consumption for traction purpose.
(ii) Improvement in efficiency of Energy consumption for non-traction purpose.
(iii) Use of renewable sources of energy viz. Solar and Wind energy.
(iv) Use of Bio-diesel and Compressed Natural Gas (CNG) as alternate fuel in place of High Speed Diesel (HSD) for traction purpose.
(v) Tree plantation to increase green cover in Railway Premises under Zonal Railways and Production Units.
(vi) Provision of eco-friendly bio-toilets in passenger coaches.
(vii) Towards better Water Management, Water Audits at major consumption centers as well as proliferation of Water Recycling Plants and Rain Water Harvesting (RWH) Systems are undertaken.

(b) The status of these initiatives is given below:
(i) An improvement of 29.9% and 1.5% has been achieved in Specific Energy Consumption (SEC) for Goods and Passenger Services respectively from 2004-05 to 2013-14 in Electric Traction. Similarly, 16.5% improvement in Specific Fuel Consumption (SFC) for Freight Service Locomotives and 16.6% improvement for Coaching Service Locomotives has been achieved from 2004-05 to 2013-14 in Diesel Traction.
(ii) Electrical Energy consumption for non-traction purpose has been constant for the past 5 years, despite increase in the connected load, due to slew of energy conservation initiatives.
195 Energy Audits have been conducted at major Energy consumption centres during the year 2015-16 for identifying the potential for Energy conservation.
Instructions have been issued for use of LEDs in new passenger coaches, Railway stations and buildings as well as use of energy efficient appliances and equipment over Indian Railways.
Such energy conservation efforts have resulted in Railways getting 23 National Energy Conservation Awards during the year 2015.
(iii) A total of 10 MW Solar Power Plant and 36 MW capacity of Wind Power Plant have been installed over Indian Railways up to March, 2016.
(iv) Use of 5% Bio-diesel in diesel traction has commenced from June, 2015. Same has been implemented in 14 Zonal Railways.
(v) Use of 20% CNG along with HSD for traction purpose has commenced in 11 Diesel Electric Multiple Units.
(vi) Nearly 40,000 hectares of Railway land is under afforestation. A total of about 180 lakhs of trees were planted during the last three years. In order to contribute substantially towards Green India Mission, an agreement has been executed between Northern Railway and Forest departments of Punjab and Haryana states on 02.05.2016 for undertaking plantation of trees alongside the railway land boundary on both the sides of the track. Directions have been given to undertake similar exercise in other Zonal Railways also.
(vii) 35000 Bio-toilets have been fitted in coaches up to March' 2016.
(viii) Water audit has been undertaken at 95 locations during the last year. 5 Water Recycling Plants (WRP) have been set up on Railways in the recent past. Works have already been sanctioned for setting up of WRPs at 40 locations. Railways have already installed RWH system at 2,200 locations so far including 326 locations during the last year.
(c) There is no such proposal to float Green bonds to fund Railways' clean energy projects.
(d) Does not arise.
(e) The other methods/techniques/technologies by which the Railways are likely to reduce carbon emission and generate clean energy are as under:
(i) Augmentation of Railway network- Railways is more energy efficient transport as compared to roadways. As a continuous process Indian Railways has been expanding the network. 813 KM of New Lines (NL), 967 KM of Doubling (DL) and 1042 KM of Gauge Conversion (GC) was done in 2015-16. Indian Railways as an environment friendly mode of transport, have grown consistently in

freight as also in passenger segment which would otherwise have been carried by roadways, thus contributing to reduction of carbon emissions.
(ii) Operationalising 3,376 km of Eastern and Western Dedicated Freight Corridors would reduce carbon emissions.
(iii) Adoption of three phase technology with regenerative braking features for locomotives and Electric Multiple Units has potential to improve traction energy efficiency leading to reduction in carbon emissions.
(iv) The Technological interventions adopted which will improve traction fuel efficiency are :
a. Provision of Auxiliary Power Units (APU) on diesel locos.
b. Multi Genset locomotives.
c. Common Rail Electronic Direct Injection (CReDI) / Electronic Fuel Injection (EFI) system.

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